
U. S. Infantry and Cavalry School,

Fort Leavenworth, Kansas, August 1, 1896.

H. S. HAWKINS,

Colonel, 20th U. S. Infantry, Commandant.

Annual Report.

7 Appendices.

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United States Infantry and Cavalry School.

Fort Leavenworth, Kansas, August 1, 1896.

The Adjutant General, U. S. Army,
Washington, D. C.

SIR :

I have the honor to submit the following report of the operations of the U. S. Infantry and Cavalry School for the first school year commencing September 1, 1895, and ending May 31, 1896.

The student class comprised the following named officers :

2nd Lieut. William M. Crofton, 1st Infantry.

“ Peter E. Marquart, 2nd Infantry.

“ Paul A. Wolf, 3rd Infantry.

“ Guy H. B. Smith, 4th Infantry.

“ John F. Madden, 5th Infantry.

“ Frank D. Webster, 6th Infantry.

“ John R. M. Taylor, 7th Infantry.

1st Lieut. Edgar Hubert, 8th Infantry.

“ John P. Finley, 9th Infantry.

2nd Lieut. John F. Stephens, 10th Infantry.

“ Herbert O. Williams, 11th Infantry.

“ Willis Uline, 12th Infantry.

1st Lieut. William N. Hughes, 13th Infantry.

2nd Lieut. James R. Lindsay, 14th Infantry.

“ George McD. Weeks, 15th Infantry.

“ George D. Guyer, 16th Infantry.

1st Lieut. James T. Kerr, 17th Infantry.

“ John C. Gregg, 18th Infantry.

- 2nd Lieut. Joseph Frazier, 19th Infantry.
 “ Robert W. Mearns, 20th Infantry.
 “ William M. Morrow, 21st Infantry.
 “ Orrin R. Wolfe, 22nd Infantry.
 “ Thomas F. Schley, 23rd Infantry.
 “ Harrison J. Price, 24th Infantry.
 “ Vernon A. Caldwell, 25th Infantry.
- 2nd Lieut. Edward Anderson, 1st Cavalry.
 “ Cornelius C. Smith, 2nd Cavalry.
 “ George P. White, 3rd Cavalry.
 “ James H. Reeves, 4th Cavalry.
 “ Powell Clayton, Jr., 5th Cavalry.
- 1st Lieut. John M. Stotsenburg, 6th Cavalry.
- 2nd Lieut. Frank Tompkins, 7th Cavalry.
 “ George W. Kirkpatrick, 8th Cavalry.
- 1st Lieut. Charles J. Stevens, 9th Cavalry.
 “ William H. Smith, 10th Cavalry.

At the examination in January, 1896, the following named officers were found deficient, and were recommended to be relieved from further attendance at the school:

- 2nd Lieut. W. M. Crofton, 1st Infantry, in Military Art.
 2nd Lieut. C. C. Smith, 2nd Cavalry, in Engineering.

By instructions from the Major-General Commanding the Army the above named officers were retained at the school and required to make good their deficiency before the beginning of the of the next school year.

At the examination in June, 1896, 2nd Lieut. C. C. Smith, 2nd Cavalry, was again found deficient in Military Art and in Engineering,' and recommended to be relieved from further attendance at the school.

REPORTS OF CHIEFS-OF-DEPARTMENT.

The course pursued in theoretical and practical work during the term is fully described in reports of chiefs-of-department, to which attention is invited. In the printing of these reports I have caused certain parts to be omitted in order to lessen their length. The omitted parts enumerate

assistant instructors, ' give names of officers delivering the lectures, give criticisms on practical exercises in the field and solution of problems, all of which, while necessary for the records of the staff, are not essential to the annual report of the commandant.

Special attention is invited to the report of the Instructor in the Department of Military Art, and to that of the Instructor in the Department of Engineering: both of which show how practical work in the field has been increased. It is hoped in the future to still further increase this practical work, and to determine by experience what more of the theory can be profitably omitted.

In the Department of Law the interest of the student has been stimulated by the introduction of its practical feature in citing for solution supposable cases in international questions which might require immediate action by an officer. Attention is therefore invited to the report of the Instructor.

I am indebted to Captain H. C. Taylor, President of the U. S. Naval War College, at Newport, R. I., for suggestions as to development along this line, which he made by letter, enclosing similar problems offered for solution by officers of the navy taking the course at the college.

CHANGES IN SCHOOL REGULATIONS.

From the experience of the school year just closed it may be safely asserted that the abolition of the system of marking for daily recitations has proved to be a wise measure. The following remarks of the Instructor in the Department of Engineering cover the subject so thoroughly that they are given here rather than embodied in the printed copy of his report :

"The experience in this department has been almost entirely beneficial, for while we realize the fact that some students have made occasional careless recitations which the spur of the daily mark might have obviated, still, on the other hand, the immense advantage to the student of having the instructor's

mind free to impart instruction, answer questions and make suggestions, more than outweighs the disadvantage referred to.

“From an instructor’s, as well as a student’s standpoint, I can say confidently that absolute fairness in marking oral recitations is impossible. One instructor will place a higher value on certain points of a demonstration than another; then again, one student will talk more fluently than another and deceive an instructor by avoiding points on which he is weak; while the further fact that one man may draw an easy subject to recite upon and another a difficult one cannot be avoided.

“Under the marking system my experience was that the student, especially if striving for honors, felt himself to be on the defensive while the instructor acted as inquisitor; now there is more freedom for both, the student does not fear losing his place in the class by a possible accident, and the instructor does not have to divert his own mind from the matter under discussion to think of “tenths”. In this connection it is pertinent to state that in the examination just concluded, and which covered the subjects of map construction, map reading and Military Topography in general more thoroughly than any previous one since the organization of this school, there was but one man who got less than 83 per cent.; while in the corresponding examination two years ago there were fourteen with a lower percentage than 83, or, to put the statement in another way, the examination just closed showed a general average of 92 per cent., while the class before, in the corresponding examination, attained an average of 86 per cent., and the class before that 88 per cent. The reason for this remarkable advance in the general average of the examination is not obvious--the average ability of the present and the two previous classes being about the same; so that the reason must be due to different methods of instruction. The new text book being fuller and more comprehensive probably accounts for most of the advance, but it is believed that part of the gain

may justly be attributed to the freedom on the part of' the instructor to give his entire attention to instructing, instead of having his mind diverted from that object in his endeavor to give the student a just mark on his recitation. '

"Whether this conclusion is fully justified or not, I am satisfied that the doing away with the daily marking system has, on the whole, been a distinctive advance to this school."

The Instructor in the Department of Military Art remarks upon this point as follows:-

"In the recitations during the past year the new regulation abolishing the recitation marks was carried into effect, with excellent results. It was formerly practicable for an officer to pass an indifferent examination and still take a respectable standing in class rank by virtue of a high aggregate of recitation marks. This is now impossible, as the result depends entirely upon the knowledge of the subject retained by the officer at the end of the term of instruction. It was feared that the abolition of recitation marks might materially affect the quality of the recitations, but such does not seem to be the case. The recitations during the past year were, on an average, fully equal to those of the preceding classes, and the examinations were, on the whole, the most satisfactory ever held at the school."

CONSOLIDATION OF' DEPARTMENTS.

It is very desirable that the Department of Cavalry and the Department of Infantry shall be developed *pari passu* with the Department of Military Art and the Department of Engineering. To do this requires the services of officers who are studious, progressive and energetic. It is not intended as a reflection upon instructors when it is stated that this object has not yet been accomplished. The work was necessarily to be developed gradually. When the school was started, clear ideas as to its scope had not been evolved. Consequently, in the primitive efforts to do something, every one reached for that which was obvious, and in those days the departments, of

Cavalry and Infantry seemed to have decided advantage, inasmuch as they had something tangible. So barrack-square drills, ceremonies, duty as officer-of-the-day and officer-of-the-guard, and recorder of boards of survey, etc., absorbed much of the time of officers of the student class, and all of the attention of the instructors in these two departments. It is evident that such a course was not consistent with the object sought in establishing the school. While it is desirable to maintain proficiency in these things, it should be, and presumably is, required of all young officers while serving with their regiments before coming to the school. In other words, they come here with the expectation of learning something more than this in the departments of Cavalry and Infantry. If this expectation is not to be realized, the name of the school ought to be changed. It is hoped, however, that satisfactory progress can be attained through the efforts of zealous chiefs-of-department.

The task is a difficult one; so difficult that the questions naturally arise : Why maintain the two departments of Infantry and Cavalry as separate and distinct Departments? Why not consolidate them with the Department of Military Art?

The present course in the Department of Infantry embraces : 1st, Infantry Drill Regulations-which, under paragraph 185 of said Regulations, should be taught to the subaltern by his captain prior to arrival at this school as a student officer; 2nd, lectures upon foreign infantry drill regulations ; 3rd, "infantry fire, and its use in battle." These are not, in themselves, suggestive of the necessity for the maintenance of a separate department. The same remark is applicable to the course in the Department of Cavalry. The Department of Artillery has had no representative since the light battery was removed.

As a matter of fact, the practical course in the handling of companies and battalions of infantry, and the squadron of cavalry, in every phase of minor tactics in the field, goes on now in the Department of Military Art; and anything which

might be attempted in that line by either the Department of Cavalry or the Department of Infantry must necessarily be a mere repetition.

The consolidated department, embracing the Department of Military Art, the Department of Infantry, the Department of Cavalry, and the Department, of Artillery, could have some distinctive title, such as, "The Tactical Department," with one chief as senior instructor, and such assistant instructors as experience would determine to be necessary.

One objection has heretofore caused me to hesitate in recommending such a step. The school staff should have, as it does at present, a sufficient number of members to avoid tie votes upon important questions, and to impose dignity in its sessions. However, in spite of such consolidation, these objects could be attained by making the senior assistant instructor in each branch of the tactical department a member of the school staff, *ex-officio*.

It is not essential that the chief of the tactical department or that either assistant should be a field officer, although! this would be desirable where rank is combined with requisite qualifications, which embrace more than familiarity with drill.

INCREASE IN NUMBER OF STUDENTS.

It has been recommended several times that one class of officers be graduated every year by having two classes simultaneously under instruction. The main obstacle reported has been the lack of quarters. This will continue to be strictly true, no matter what may be the expenditure of the government in erecting additional quarters, so long as married officers are to be sent to the school for instruction.

If none but bachelor officers were sent as students the accommodations now existing would, with a little crowding, admit of the detail of two officers from each regiment. Provided that marriage while at the school would insure the student's immediate return to his regiment.

DIPLOMA.

The incentive for effort by the student should be pride in his profession impelling him to acquire all that he can. Unfortunately other stimulus is needed. This may be found by causing the diploma to exempt a graduate from examination, upon any subject covered in the school course, when he is brought before a board prior to promotion. Greater proficiency in attaining the diploma being required there would be greater effort on the part of the student.

INSTRUCTION IN THE THREE ARMS.

To properly conduct operations in minor tactics a light battery is greatly needed at the school. The battery which was formerly available was removed on account of lack of quarters. This deficiency could be supplied by using the present hospital as a barrack. It is not suited to its present use. It is a perfect labyrinth and being insufficient, the medical department is contemplating more additions which can never make it what a modern hospital should be. By erecting a new hospital the old building will answer for the light battery.

ANNUAL APPROPRIATION.

Attention is invited to the report of the Secretary showing the necessity for an increase in the amount appropriated for the use of the school.

Very respectfully,

Your obedient servant,

H. S. HAWKINS,

Colonel, 20th Infantry,
Commandant.

APPENDIX A.

U. S. Infantry and Cavalry School.

Secretary's Office.

Fort Leavenworth, Kansas, July 10, 1896.

The Commandant,

U. S. Infantry and Cavalry School.

SIR:

I have the honor to submit herewith the following report pertaining to the school as secretary and disbursing officer:

The fifteen hundred dollars (\$1500) appropriated for the school has been expended as follows:

Library: Books of reference for the several departments, and scientific papers and periodicals. \$358.59
Binding and repairing library books. \$90.25

Department of Engineering: Purchase of instruments and materials. \$482.66
Repairing instruments. \$66.50

Department of Military Art: Purchase of maps and materials for making and mounting maps. . \$28.95

Printing Office: Purchase of paper, ink, rollers, etc., including extra duty pay to enlisted men employed as printers. \$415.55

Stationery, office and section room supplies \$57.50
\$1500.00

The appropriation above referred to is entirely inadequate to meet the absolute needs of the school. Its scope is widening every year, more facilities are required by the various departments, and the school library should be largely increased. Many urgent requests from chiefs of departments have to be refused for lack of funds, and, were it not for the fact that many indispensable articles are procured from another source, without expense to the government, the course would be greatly hampered.

Many of the instruments used by the department of engineering are old and require constant repair and should be replaced by new ones. The library should have an annual allotment of at least \$500.00.

The printing office, an indispensable adjunct to the school contributing to the efficiency of every department, has been conducted with a maximum of industry and a minimum of expense. The entire cost, including paper, ink, binding, labor, etc., for the fiscal year ending June 30, 1896, has been \$415.55. It is not practicable to give here a list of the nature and amount of the work performed, but it is safe to say that if the work had been done by contract, at a rate of from 18 to 20 cents per 1000 ems, the cost would have exceeded \$2000. Much of the type and some of the machinery are old and should be replaced as soon as funds become available.

An appropriation of \$5000, which has repeatedly been recommended by the War Department would enable all of the departments of the school to be properly equipped for the work expected from them.

The library has been properly cared for during the year and now contains 7200 bound volumes, besides 480 pamphlets. 142 volumes were added during the year at a cost of \$271.89, and \$90.25 was expended for rebinding and repairing books. The present catalogue is by authors only. It is the intention however to re-arrange it under the subject system; this is a tedious work and its accomplishment will require considerable

time. During the year 3500 volumes were taken from the library and more than that number were used in the library for reference. Two additional book stacks were provided ; also, a map rack, and all maps (over 1000 in number) are now indexed and so arranged that no time is lost in finding any of the maps when called for.

The school property, comprising all instruments, books, maps, models, printing office, library, office and section room furniture, is in good condition, with the exception of the instruments pertaining to the department of engineering, mentioned before. These instruments have now been repeatedly repaired, and the cost of this constant repair will, in a few years, exceed the cost of new ones.

Under the provisions of G. O. No. 80, A. G. O., 1891, prescribing regulations for the examination of officers for promotion, I have furnished to officers of the army and national guard 1647 volumes (text-books, books of reference, and professional works) amounting to \$3556.48. From the number of requests for books and information received, it is evident that much interest is now taken by our National Guard in military education.

As stated in my last report, many requests for the "Cavalry Sketching Case" were again received but could not be filled. In a few cases those in use here were loaned out on memorandum receipt while not in use. It is to be regretted that young officers who are energetic and willing to attain to the highest standard of their profession, are hampered for the necessary instruments. Arrangements are now being made to furnish the Cavalry Sketching C&e to all who desire it at a reasonable cost.

I am, Sir, Very respectfully,
 Your obedient servant,
 C. W. PENROSE,
 1st Lieutenant 11 th Infantry,
 Secretary.

APPENDIX B.

U. S. Infantry and Cavalry School.

Department of Military Art.

Fort Leavenworth, Kansas, June 30, 1896.

TO

The Secretary,

U. S. Infantry and Cavalry School.

SIR:

I have the honor to submit the following report of the course and methods of instruction in the Department of Military Art during the School term just ended.

The instruction consisted of recitations, lectures, and exercises in application. There were in all 96 recitations, 6 lectures and 80 exercises+ in application. The recitations were from Wagner's "Service of Security and Information" and Wagner's "Organization and Tactics." The examination in the first of these books was held on January 6, 7, and 8; the examination in the latter on June 8, 9 and 10 of the present year. The recitations before January covered the entire subject of Security and Information, and took 329 pages of "Organization and Tactics." The recitations after the January examination completed the latter book, and in-

eluded a review and a general review of the same.. In the January examination eight members of the Class failed to pass a satisfactory examination, and were re-examined in accordance with paragraph 48 of the Regulations of the Infantry and Cavalry School. On re-examination one officer was found deficient, "but, in accordance with instructions from Headquarters of the Army, he has been continued on probation, and will be re-examined in the subject at the end of August. In the June examination two members of the class failed to pass a satisfactory examination, and were re-examined in accordance with the regulation already referred to. One of these officers passed the re-examination successfully; the other has been declared deficient, and reported to the Headquarters of the Army. as required by existing regulations.

LECTURES.

The lectures were as follows:—

Field Orders, Messages and Reports.

Map Maneuvers.

Map Maneuvers (the above continued.)

Military Policy and Institutions.

Balloons in War.

The Autumn Maneuvers in Europe in 1895.

The lectures in the Department of Military Art are always printed, and copies are given to the members of the class. They are also sent out on application to any officer in the Regular Army or National Guard.

EXERCISES IN APPLICATION.

The exercises in application consisted of:

Exercises with Troops,

Field Practice Exercises, or Exercises without Troops,

Tactical Problems,

Maneuvers on the Map.

Exercises with Troops.—The course in Exercises with Troops was the most extended and satisfactory yet held at the School.

The tactical exercises in which infantry alone was employed were under charge of the Instructor. Those in which cavalry alone was employed were under charge of the senior Assistant Instructor. This arrangement enabled infantry and cavalry exercises to be conducted independently on the same day. In exercises embracing the use of both arms the Instructor was in charge. In all the exercises the infantry and cavalry commands were officered exclusively by details from the Class of student officers. The regulations governing these exercises and the nature of the exercises, are given below.

GENERAL REGULATIONS FOR TACTICAL EXERCISES.

In the details for tactical exercises, as announced from time to time on the bulletin board, the officers whose names appear first in the detail for each company will perform the duties of company commanders. In making the details for tactical exercises, the matter of relative rank is necessarily ignored, in order that all members of the class may perform the same duties and receive the same instructions.

Within twenty-four hours after the conclusion of each tactical exercise, except advance guard drill, each battalion and company commander will submit a report of the part performed by his command in the same. The reports will be addressed to the Instructor in Military Art. The comments of the instructor on the exercise will not be made until all reports have been received and carefully considered.

Unless otherwise specially ordered, the exercises in the forenoon will begin at 8 o'clock, and those in the afternoon, at 1 o'clock.

When an announced exercise is prevented by inclement weather, the class will be for duty in the Department of Engineering.

Officers on tactical exercises will wear campaign hats and leggings. When mounted they may wear boots or leggings, as they may prefer.

OCTOBER 16-17.

Infantry: March of Concentration.

Eight companies of infantry left the post on the 16th for the following points, where they went into camp. The route to camp in each instance was different from that by which the company was to return:

- A Company, Lowemont.
- B Company, Kickapoo.
- C Company, Tracy.
- D Company, Soldiers' Home.
- E Company, Farley.
- F Company, Weston.
- G Company, Farley.
- H Company, Easton.

Instructions for Company Commanders.

"Each company commander will provide himself with a pair of dividers and a suitable measuring scale.

' 'In marching to the place selected for the camp of his company he will carefully note the rate of marching, and will also take note of the condition of the road, as compared with the reported condition of the road by which he is to return.

"From the distance (as given on the map) and the rate of marching, he will estimate the time required for the march to the post by the designated route, and will accordingly fix the time for starting from the camp.

"The company must start from camp at *exactly* the designated time. The company commander will accordingly estimate the time for having the cooks called, for reveille, breakfast, the general and the assembly. The time fixed for each will be noted in the report submitted.

"The march must be conducted strictly in accordance with Drill Regulations (p. 236). In making the prescribed halts for rest, the company commander will be expected to exercise judgment and select suitable places for resting. If in so doing he marches the company more or less than the cus-

tomary fifty minutes, he will shorten or lengthen the next marching interval, so that there will be an average of a ten-minute rest every hour.

“The march must be regular, uniform, and of a proper rate of speed. The acceleration or retardation of the pace in order to reach the rendezvous at the exact time specified is forbidden.

“The company commanders will see that no depredations upon the property of civilians are committed by their men.

“Within twenty-four hours after their return to the post the company commanders will submit a report stating the time of departure from post, the route followed, and the time of arrival at camp, and will set forth everything of note that may have occurred while there. The time of starting on return march, the number and duration of halts, the time of return to the post, etc., will be noted in the report.

“It is desired that the march be so timed and regulated that, without hurry or delay, or any violation of the rules prescribed in the Drill Regulations, each company will arrive on the West End Parade at exactly noon on the 17th inst.”

The companies effected their concentration on the West End Parade on the 17th inst., arriving as follows:

A Company at 12.01; B Company at 12 M. ; C Company at 11.40; D Company at 12.0.30; E Company at 12 M.; F Company at 11.59 ; G Company at 12 M. ; H Company at 11.59.

Cavalry: Advance Guard Drill.

The ten cavalry officers of the class were assigned to the four troops of cavalry, and drilled in the formation and assembling of advance guards. The advance guards each consisted at first of a single troop, and afterwards of two troops.

OCTOBER 21ST, A. M.

Infantry: Advance Guard Drill.

Eight companies; each with a full complement of officers

from the class, were drilled in the formation of' advance guard and assembling from the same. The drill was by company, by battalion, and by two battalions combined.

OCTOBER 21ST, P. M.

Infantry: Normal outpost Formation.

In this exercise the exact normal formation of an outpost on the cordon system was represented. The positions of the various components of the outpost were established by exact measurements, so as to present a living diagram, as it were. The object of the exercise was to familiarize the students with the appearance of an outpost and the relative positions of its parts, preparatory to establishing an outpost according to the terrain. The position of the reserve was on the West End Parade, the line of resistance being on the cavalry drill ground. Force employed, one regiment of infantry.

OCTOBER 21ST AND 22ND.

Cavalry: March of Concentration.

Four troops of cavalry left the post on the 21st and marched to points on the Big Stranger Creek, where they camped at 14 to 20 miles from the post. The route to camp in each instance was different from that by which the troop was to return.

The instructions to troop commanders were nearly the same as to company commanders.

The troops effected their concentration on the West End Parade on the 22nd, arriving as follows:

F Troop at 11.53 A. M. ; C Troop at 11.55 A. M. ; K Troop at 11.55 A. M. ; B Troop at 12.15 P. M.

OCTOBER 22ND.

Infantry: Outpost Formation According to the Terrain.

This exercise consisted of the establishment of an outpost facing south and covering a force supposed to be at Fort Leavenworth. The outpost was formed in accordance with the require-

ments of the terrain. The ground used and the force employed were the same as in the preceding exercise.

Cavalry: Outposts, Normal Formation.

Idea. Squadron will be formed at stables at 1 o'clock P. M. The exercise will be in the normal formation of the outposts on a cordon system. The squadron will be placed as a part of a general outpost line. The 3rd and 4th troops will constitute a support, the 1st and 2nd troops will each constitute a picket with two double vedette posts.

Vedettes will be relieved every twenty minutes. Pickets will be relieved every hour. In the first instance this time will begin to count from the first rectification of the outpost line.

Officers will personally instruct their N. C. O's and men, the troop commander being responsible for the first relief, and the lieutenants for the second and third reliefs.

OCTOBER 23RD.

Infantry: Outpost Formation According to the Terrain.

This exercise consisted of the establishment of an outpost on Sheridan's Drive, facing west, to cover a force supposed to be in camp at Fort Leavenworth. Two battalions of infantry were employed, and a third was supposed to hold the center of the line. The right rested near the junction of Sheridan's Drive and the Millwood road; the left, near the railroad cuts.

Cavalry: Outpost Formation According to the Terrain.

The force employed consisted of a squadron of cavalry, which was marched to Salt Creek village and countermarched so as to face east. For the purposes of the exercise, the following was assumed: "The enemy is due east of this point. The ground beyond Sheridan's Drive is open, rolling country, with lines of travel running generally east and west. No river lies beyond. The squadron is part of a 111 outpost line. Its flanks are protected by other troops, and it watches the ground between Leavenworth City and Kearney Avenue."

OCTOBER 24TH.

Infantry: Outpost Formation According to the Terrain.

This exercise was a repetition of the exercise of the day before. A cyclist patrol was sent out to "The Frenchman's," from which point reports were sent in, from time to time, to the outpost position.

Cavalry: Outpost Formation According to the Terrain.

In this exercise it was assumed that the squadron had just arrived from Atchison, and that the enemy was in the direction of Leavenworth city, his outposts having been seen at the Prison brick-yard and on Sheridan's Drive. The exercise began with the squadron at the junction of the Millwood road and Sheridan's Drive. A line of Cossack posts was established, and patrols were sent out, the entire country from the Salt Creek Valley to the Missouri River being kept under observation.

OCTOBER 25TH.

Infantry: March of a32 Advance Guard.

The advance guard consisted of a regiment of infantry, which was supposed to be the advance guard of a force consisting of two brigades. The line of march was from the West End Parade *via* the cemetery and the railroad cuts, to the Atchison pike, which road was followed to a point some distance beyond the railroad west of the Frenchman's. The Millwood road was supposed to be non-existent, so that no precautions were required in regard to the enemy on that route. A few hundred yards beyond the railroad the enemy was supposed to be encountered, and the advance guard formed line on the support, taking up a strong defensive position behind the railroad embankment, and opening fire. The enemy being repulsed, the exercise terminated, and the troops marched back to the post. A cyclist patrol (hostile) was used to watch the movements of the advance guard. A part of the patrol was captured, the rest escaping by a long detour to the Kickapoo road.

Cavalry: Outpost Formation According to the Terrain.

This exercise was a repetition of the exercise of the day before.

OCTOBER 28TH.

Infantry: Conduct of a Rear Guard.

Idea. A force operating beyond Salt Creek has been defeated by the enemy, and is retreating upon Fort Leavenworth for the purpose of crossing the Missouri River. The rear guard consists of one regiment of infantry. The enemy is following closely, and it is necessary to check his advance by destroying the railroad bridge over Salt Creek, and the bridge at the Frenchman's, and obstructing the roads at the railroad cuts.

The exercise began just beyond the railroad west of the Frenchman's, where the enemy's pursuit was supposed to be first seriously felt. A defensive position was occupied at the railroad, and the pursuit was supposed to be checked by the fire of the rear guard long enough to admit of the blowing up of the railroad bridge over Salt Creek, and preparing the wagon bridge at the Frenchman's for destruction as soon as the rear guard should cross. The rear guard withdrew, and took up a defensive position on Sheridan's Drive, near the railroad cut, which was held until the engineers had time to blow up the road at the cuts, and obstruct the road leading from the direction of the target range. The exercise then terminated.

Cavalry: The Posting of Cossack Posts in a Wooded Country.

This was practically a repetition of the last two exercises, it being thought best to repeat it, in order to give emphasis to many important points developed by the attempt to post an efficient line of outposts in a closely wooded country. The squadron was consolidated into two troops, of two platoons each.

OCTOBER 29TH.

Infantry and Cavalry: Outpost According to Terrain, Including Night Dispositions.

The outpost was established facing south between the railroad cuts and the river, at 3 P. M. At dusk the dispositions for night were made. At 10.30 P. M. the outpost was supposed to be attacked, and its defense was simulated. The force employed consisted of one regiment of infantry, one squadron of cavalry, and two field pieces. The exercise should have begun at 1 P. M. instead of 3, as more time was needed to inspect and rectify the day dispositions before those for night were made.

OCTOBER 31st.

Infantry and Cavalry : Advance Guard and Cavalry Screen.

Idea : A force consisting of four brigades of infantry, four batteries of artillery, and one squadron of cavalry, crosses the Missouri River at Fort Leavenworth against a force of the enemy marching east from Topeka.

The advance guard, consisting of two regiments of infantry, one battery, and one squadron, has crossed the Rock Island bridge, and moves out to take up a defensive position to cover the crossing of the main body.

All troops considered, except one regiment of infantry, and one squadron of cavalry, are imaginary.

The railroad bridge at Leavenworth is supposed to have been destroyed.

The cavalry screens and reconnoiters the front, and the infantry establishes an outpost.

The force was supposed to march on two parallel roads, namely, the Millwood road and the Atchison pike, a battalion of infantry actually taking the two roads-or, rather, their continuation-from the Rock Island bridge. The infantry advance guards were preceded at a distance of several miles by the cavalry as a screen, the cavalry taking the road *via* the north end of Sheridan's Drive, the Cemetery and railroad cuts, and Logan Avenue. The infantry established an outpost, taking up an excellent defensive position, on Sheridan's Drive; and the cavalry thoroughly scouted the front along

the Kickapoo road, from the village, to a point some distance south of the Atchison pike.

NOVEMBER 1ST.

Infantry and Cavalry: Continuation of the Preceding Exercise.

Idea. The force has crossed the Missouri and encamped at Fort Leavenworth. The following morning it continues its march into the Salt Creek Valley, one battalion marching as an advance guard on the Atchison pike, and the other on the Mill wood road. A cavalry screen precedes the infantry, and reconnoiters several miles to the front, and well to the right and left. Each infantry advance guard is accompanied by a cyclist detachment, and communicates with the other column at each lateral road.

At a point about $3\frac{1}{2}$ miles west' of the Frenchman's the enemy was supposed to be encountered. The advance guard of each column was at once deployed in a defensive position, and the commander of the forces was required to select a position for the entire supposed command; namely, four brigades of infantry, four batteries of artillery, and a squadron of cavalry. The position having been designated in detail, the exercise ended, and the command marched back to the post. The principal object of this exercise was the selection of a position on a terrain which presented no marked physical feature to indicate a proper line.

PATROLLING EXERCISES.

Nov. 4th.	Four infantry patrols.
Nov. 5th.	Four infantry and four cavalry patrols.
Nov. 6th.	Four cavalry patrols.
Nov. 11th.	Four infantry and four cavalry patrols.
Nov. 12th.	Four infantry and four cavalry patrols.
Nov. 13th.	Four infantry and four cavalry patrols.
Nov. 14th.	Four infantry and four cavalry patrols.
Nov. 15th.	Seven infantry and five cavalry patrols.

Nov. 18th. Four infantry and four cavalry patrols.

Nov. 19th. Two cavalry patrols.

In the patrolling exercises the patrols were all small, consisting of a lieutenant, a non-commissioned officer, and five privates.

The rules prescribed were simply that the patrols should be conducted according to the general principles prescribed in "Security and Information," special stress being placed on the rule that the patrol should always be so formed as to facilitate the gaining of information and to insure, as far as possible, the escape of at least one man, if the patrol should be cut off. The route assigned to each patrol was such as to bring it into contact with another patrol before the conclusion of the exercise. An umpire was assigned to each patrol, who was required to report upon the dispositions made by the patrol commander for gaining information, for concealing his patrol, for keeping his patrol in hand, etc. A patrol discovering the enemy and getting a shot upon one of his men, within less than 100 yards before being discovered itself, was assumed to be successful.

APRIL 21ST, A. M.

An Advance Guard Marching through the City of Leavenworth, Kansas.

STRENGTH: Eight companies of infantry and four troops of cavalry.

DISTRIBUTION: Principal column, $\frac{1}{2}$ troop and 8 companies, to march as follows: Advanced party, $\frac{1}{2}$ troop; support, 2 companies; reserve, 6 companies; 4 strong cavalry patrols, each to march in advance guard formation; No. 1, $\frac{1}{2}$ troop; Nos. 2, 3, and 4, 1 troop each.

LINE OF MARCH: Principal column, through Broadway to Spruce St.; right flanking group of advanced party, by 8th St. to Delaware St. and Railroad Ave. to Spruce St.;

left group, by 7th St. to Cherokee St. and West 7th St. to Spruce St. Flanking groups of support to follow corresponding groups of advance party.

Patrols : No. 1, by Metropolitan Ave., 13th St., Miami St., 14th St. to Spruce St., detaching two small patrols (1 non-commissioned officer and 3 privates each) to Spruce St., one by Metropolitan Ave. and 20th St., the other by Ottawa St., 17th St., Cherokee St. and 18th St. No. 2, by 9th St. to Spruce St., detaching 2 small patrols (one non-commissioned officer and 5 privates each) to Spruce St., one by Metropolitan Ave. and 10th St., (this small patrol to observe also 11th St. where open) the other by 12th St., High St. and Newman St., (this small patrol to observe also 13th St. from Miami to High Sts. No. 3, by 6th St. to Spruce St., with small patrols (1 non-commissioned officer and 3 privates each) to Spruce St. by 4th St. and by 5th St. This strong patrol to detach, at a suitable point, an officer and 5 men to visit the police station and the Burlington R. R. Depot, both on 5th St. No. 4, by 3rd St. to Spruce St., with small patrols (1 non-commissioned officer and 3 privates each) to Spruce St. by 2nd St. and by the Esplanade. This strong patrol to detach, at proper points, two officers' patrols of 3 men each, one to visit Post Office on 4th St., the other the W. U. Telegraph Office and the Union Depot., both on Delaware St.

The advance guard formation will be taken up at Broadway and Metropolitan Ave. The necessary orderlies for the principal column will be taken from the cavalry troop designated to act as No. 4, strong patrol.

The strong patrols, while keeping in communication with their detached small patrols, will regulate their march by that of the advanced party of the principal column, communicating with it by signal at Kiowa, Ottawa, Miami, Shawnee, and Cherokee Sts. The signals of the outer patrols will be transmitted by the inner patrols, and in case the signal of any is not at once received, the commander will halt the advance guard until communication is established.

On arriving at Spruce St. the advance guard will assemble on the principal column, the small patrols first assembling on the strong patrols from which detached, and the inner strong patrol following the one on its outer flank.

APRIL 21ST, P. M.

Advance Guard vs. Rear Guard.

IDEA. A force, (Blue) consisting of a brigade of infantry and two troops of cavalry, has been defeated in a battle near Lawrence, and is retreating upon Leavenworth for the purpose of crossing the river. The bridge at Leavenworth city has been destroyed, and the one at the Fort furnishes the only means of crossing. The country north of an east and west line passing through Merritt Lake, and west of Grant Avenue, is supposed to be impassable. The rear guard consists of a battalion of infantry and two troops of cavalry. It is closely followed by a Brown advance guard of equal strength: and on emerging from Leavenworth city it finds it necessary to make a stand to cover the crossing of the main body and the train across the bridge.

Problem for the Blue. To compute the time required for the passage of the main body with its train (ammunition and supply) and the time required to prepare the bridge for destruction by the rear guard.

The selection of a defensive position.

The deployment from rear guard formation and occupation of the position.

The dispositions for checking the advance of the enemy.

The dispositions for the withdrawal of the rear guard before it is compromised in an engagement with the main force of the enemy.

Problem for the Brown. The decision whether to attack at once, or merely to endeavor to hold the enemy until the arrival of the main body.

In the former case the selection of the point of attack, and

the dispositions for the attack: in the latter case the measures to be adopted to hold the enemy until the reinforcements arrive.

In either case, the change from advance guard formation to the order suitable for demonstration or attack.

APRIL 23RD, A. M.

Reconnaissance in Force.

IDEA. A force (Brown) takes up a defensive position at the railroad cuts, for the purpose of barring the Atchison pike and the road to Salt Creek from a force (Blue) which is advancing from the east. Sheridan's Drive and the quarry road exist, but the Millwood road and its continuation around the north of the ridge are supposed to be out of existence, for the purposes of the problem. The Brown force consists of a battalion of infantry and two troops of cavalry, part of the force being in reserve at Salt Creek village.

The Blue force, consisting of one battalion and two troops, advances from the Rock Island bridge. The enemy is known to be in the vicinity of the railroad cuts, but his strength and position are unknown. To ascertain these matters the Blue commander makes a reconnaissance in force.

Problem for the Blue. A reconnaissance in force.

Problem for the Brown. The selection and occupation of a defensive position.

APRIL 23RD, P. M.

The Defense of a Section of Country that is Passable at but Two Points.

A Brown force (4 companies of infantry and two troops of cavalry) is ordered to hold the line of Corral Creek against an advancing enemy marching from the north. The creek is passable at but two points, one by the bridge over Grant Avenue, the other by the bridge over the target-range road. The destruction of the bridges is not authorized.

A Blue force (4 companies of infantry and two troops of cavalry) arrives at the Prison brick-yard, by the Millwood

road, en route to Leavenworth. The commander is informed that Corral Creek is impassable, except at two points, one by the bridge on Grant Avenue, the other by the bridge on the target-range road. Each of these points is held by a company of infantry,, and no reserves are in sight. The bridges are barricaded.

The Blue force is required to brush away the force of the enemy at one of the points, and thus secure a crossing for the main body which is in rear.

The defense will be considered to have been successful if it opposes the offense with a superior force at the point where the latter makes its main attack. The offense will be considered successful if this condition does not exist.

The commanders of the opposing forces to be given sufficient notice to admit of an examination of the ground and the preparation of plans before the day set for the exercise. The commanders will communicate their plans to the Instructor, Department of Military Art, before the exercise.

The umpires to be informed of the plans of the commanders, and to be required to stop the exercise when the attacking force arrives within 150 yards from the point of attack. The umpires then, after considering the features of the attack and defense ; the position of the Brown reserves ; the time necessary for those reserves to reach the point of attack after receiving intelligence of its direction; and the means employed to ascertain this intelligence; to decide on the success or failure of the attack-the Instructor announcing the decision.

APRIL 27TH, A. M.

Advance Guard and Outpost.

GENERAL IDEA. A Blue army, based on the Kansas River, near Lawrence, is operating against a Brown army in northeastern Kansas.

Special idea and problem for Blue force. The Blue army expects to occupy the line, Leavenworth-Winchester, on the

27th of April. The first corps is encamped near Lansing on the 26th of April.

Orders for the 27th direct the march of the divisions as follows: I. Division to North Leavenworth ; right resting on Missouri River . II. Division to Northwest Leavenworth, one mile south of Beddow's farm. III. Division to the head of Salt Creek Valley.

Problem. The head of the main body of the II. Division will arrive at Kiowa Street at 9 A. M. A detachment consisting of two battalions of the 20th Infantry and three troops of the 6th Cavalry will take position as advance guard at that time; march northwest on the Beddow farm road, and when the support arrives at the Beddow house, will take up a position as outpost for the Division, towards the north, The western limit is the boundary of the reservation; the eastern about 600 yards from Grant Avenue.

Reports will find the commander of the outpost at Beddow's house.

Problem for Brown. As soon as the outpost is established the Brown force (one troop of cavalry) will use harrassing patrols for the purpose of annoying the outpost and compelling it to disclose its position. The commander of the Brown will also use a flag of truce for the purpose of reaching the outpost and endeavoring to gain information. Certain soldiers of the Brown force will also present themselves as deserters at the outpost, and will endeavor, if not disarmed, to effect the capture of a picket.

APRIL 27TH, P. M.

Example of Utilizing the Terrain for the Concealment of an Advance.

IDEA. A battalion of infantry is directed to march in attack formation from the Beddow house to the West End Parade, distant about 3,000 yards, utilizing the cover for concealing its movements as far as possible. The remainder

of the troops are placed in observation on the West End Parade to note the degree to which cover for the attack may be obtained from the terrain.

The benefit derived from such exercises can hardly be overestimated, and those at the Infantry and Cavalry School have a peculiar value, which is perhaps not generally recognized. At the time set apart for these exercises, the troops of the garrison, in numbers suitable to the nature of the exercise, are turned over to the Instructor in Military Art, and are officered entirely from the class of students. As a result, a subaltern who, in the course of his regimental duty may never have had command of any body of troops larger than a platoon; finds himself in command of a regiment of infantry, a squadron of cavalry, or both, not merely to put them through a regulation close-order drill, but to march them, encamp them, prepare them for attack, make dispositions for defense, etc., and in every case to act promptly in accordance with varying conditions and the nature of the terrain. These exercises are well calculated to develop a young officer's self-reliance and confidence, more than any amount of ordinary garrison service. The peculiar advantage possessed by the Infantry and Cavalry School in this respect, lies in the fact that it is the only place where a large command and a full complement of young officers can be combined.

It was feared by some of the garrison officers that the troops would deteriorate in discipline and efficiency by being taken from their own officers and placed temporarily under command of young officers who were strangers to them. How groundless this fear was is shown by the condition of the troops to-day. In fact, a detail from the class furnishes, a complement of officers which few regiments can equal and none hope to excel; and during the exercises with troops my admiration was often excited by the tact and ability of the student officers and the discipline and efficiency of the troops.

A battery of light artillery is needed here in the tactical instruction of the students. If it be impracticable to station a battery here permanently, I would respectfully suggest that a battery be sent here for at least a month each year, and that during that time it be available for the instruction of the students in artillery drill, and for use in tactical exercises.

Tactical Problems.—The tactical problems and the instructions for the class in the same were as follows:—

INSTRUCTION FOR THE CLASS IN TACTICAL PROBLEMS.

1. The solutions of the problems will be written in ink on legal cap paper, both sides of the paper being used and one blank sheet being left at the end. The papers will not be folded, rolled or briefed.
2. A copy of the problem is furnished each officer. This copy will be dated and numbered Page I., and signed as follows at the upper right hand corner.

Submitted by

.....(Name.)

.....(Rank.)

3. The second page will be numbered, and headed ‘‘Solution.’’ The other pages will be numbered, and the whole fastened together.
4. Tactical organizations will be designated by letters and numbers in the usual way. Fictitious names will not be used, but letters of the alphabet will be used in place of proper names when necessary.
When desirable, the answer may be divided into two parts,—one part giving the proper answer to the question, and the other part devoted to any reasons or explanations that may be thought necessary.
5. A wide range will be allowed in the solution of these problems. Any idea which is not manifestly wrong will usually be considered right, if it be developed in a logical way. Much weight will be given to simplicity and clearness. ‘Such faults as carelessness, illegibility in writing, and indifference, will not be excused.

NO. 1. PROBLEM.

You are in command of an army corps, within a single march of the enemy. You are moving forward with the intention of bringing him to battle. The country is suited to the action of all arms, and the corps is marching on two parallel roads, two divisions on one road, and one division on the other. State the composition of the advance guard of the larger column, the order of march of this advance guard, and the distances between its component parts, and between it and the main body. If the composition, distances, and dispositions are different from the normal, give the reasons therefor.

Note: The corps is composed of 3 infantry divisions and one regiment corps of cavalry. Each infantry division consists of 3 brigades of infantry, 4 batteries of field artillery, 1 bearer company, and 1 ambulance company.

NO. 2 PROBLEM.

A	B	C	D	E
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You are in command of a force operating offensively against an enemy who stands on the defensive, facing south, on the line A E, while awaiting the development of your movements. The length of the line A E is about 30 miles. Your main body is about 40 miles away. Patrols pushed far to the front send in reports as follows, which are forwarded to you by the commander of your advanced cavalry.

Patrol No. 1 reports at 9 a. m. "Large force of enemy in camp at A-infantry, cavalry, and artillery. Considerable noise in camp and much smoke rising. Outpost strong."

At 3 p. m. the same patrol reports: "Enemy's camp quiet. Noise of rumbling vehicles and the braying of mules heard shortly after noon. Noise seemed to die out in the distance. Outposts have not been changed."

At 10 p. m. "Much noise in enemy's camp all afternoon. Rumbling of vehicles and noise of animals distinctly heard. Noise has ceased. Fires very numerous, but lighted suc-

cessively, and do not burn steadily. Outposts strong and vigilant. I tried to penetrate the enemy's line of observation, but encountered such resistance that I had to abandon the attempt, and was forced to leave one trooper of my patrol wounded (I think mortally) in the hands of the enemy." Nothing later from this patrol.

Patrol No. 2 reports at 4 p. m. "Heavy column of dust seen north of B, about 2 p. m., moving east. Tried to get in close enough to see what caused it, but ran into a strong patrol of the enemy, and three of my men were captured; I think one was killed and the others wounded. Have only one man with me, but will try again." Nothing further heard from this patrol.

Patrol No. 3 reports at 8 p. m. "Enemy in camp at C. Noise and hurraing heard repeatedly. just before dusk. Fires numerous and burning steadily. Rumbling of vehicles and braying of mules heard almost constantly; Fires seem to increase in number. Locomotive whistle just heard followed by hurraing. "

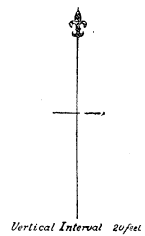
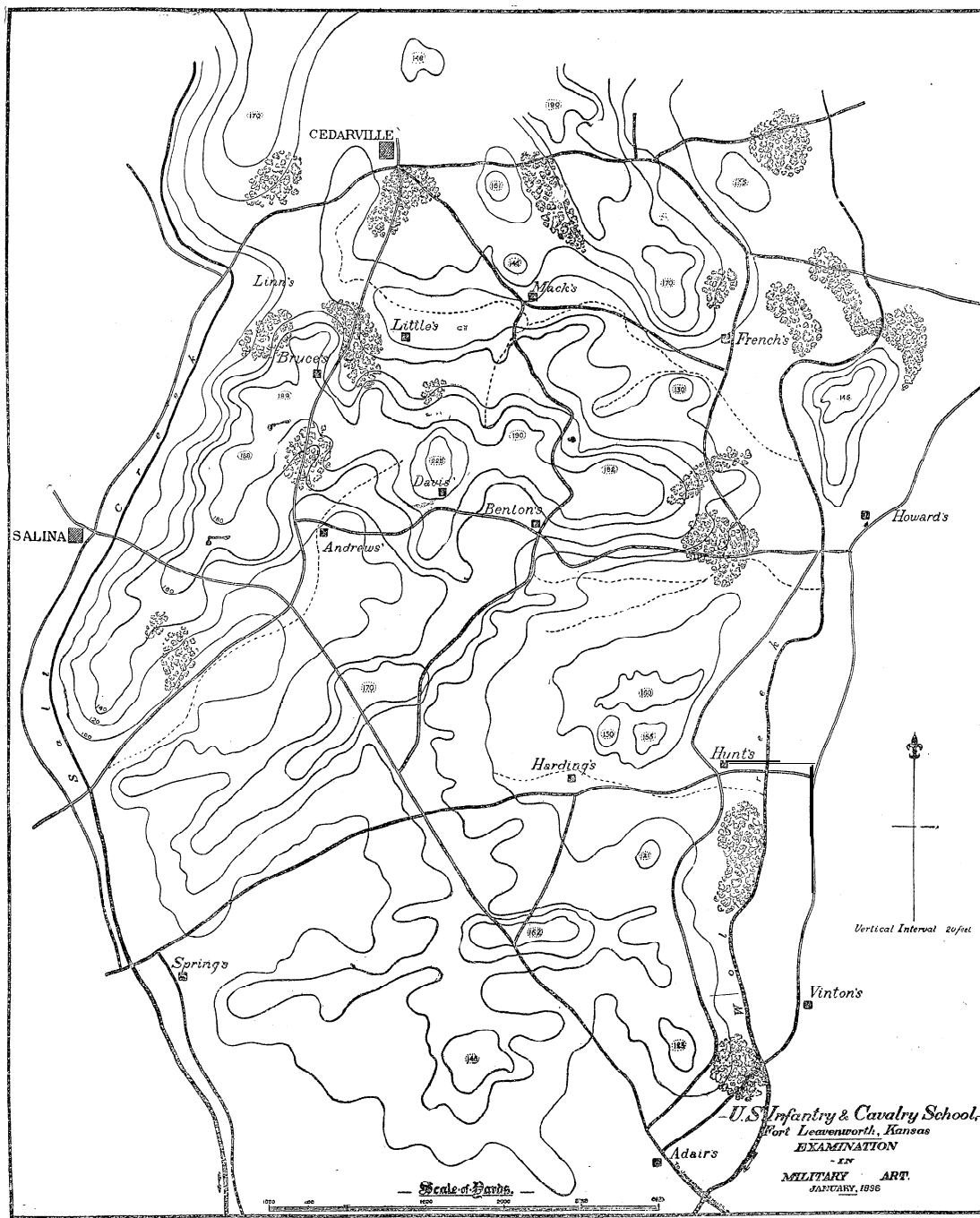
Nothing at all has been heard from patrol No. 4, which was sent towards D.

Patrol No. 5 reports at 11 a. m. "Much noise in enemy's camp at E since early this morning. Several explosions heard there about 10 o'clock. Outposts strong and vigilant, and I have not yet been able to get close to hostile camp. Noises seem to be dying out,"

At 5 p. m. the same patrol reports : "Everything quiet in enemy's camp, but outposts are too strong and vigilant for me to get near camp."

At 11:30 p. m. the same patrol reports: "Enemy's camp is quiet, but numerous camp fires are now blazing brightly and clearly. "

Question: -What conclusion as to the enemy's movements would you draw from the above reports?



— Scale of Faths. —

U.S. Infantry & Cavalry School,
Port Leavenworth, Kansas
EXAMINATION
MILITARY ART.
JANUARY, 1896

NO. 3. TACTICAL PROBLEM.

Problem:—Establishment of outposts.

Situation:—A Blue division retreating from the north is reported to be at Jonesboro, with outposts at Adair's.

A red division follows and halts for the night in the triangle, Cedarville, Linn's, Mack's.

A 1 p. m. September 1, the colonel of the 1st Regiment of Infantry arrives at Cedarville, and is detailed to command the outposts.

In addition to his own regiment, the following troops report to him, namely :

- 1 squadron 1st Cavalry regiment,
- 1 battery 1st Artillery regiment,
- $\frac{1}{2}$ company Engineers.

Question:—I. Mark on the map the positions of the outpost, including each vedette and sentinel, and the route of each patrol.

II. Write the orders of the colonel.

NO. 4. TACTICAL PROBLEM.

Problem:—March of a detachment of all arms.

Situation:—A Southern army is marching on Atchison in hostile country.

On the afternoon of to-day Colonel A. of the Southern Army is given command of a detachment of troops camped at Easton. His orders are to disable "the Kansas Central Railroad tomorrow by blowing up the tunnel (supposed) at the railroad cuts west of Fort Leavenworth.

He is informed that the Missouri River is fordable for all arms, that hostile cavalry patrols have been seen to-day east of Beverly, and that infantry and artillery of the enemy are at Platte City.

His engineer officers inform him that the work of destruction will take three hours. The tools and explosives necessary must be carried in wagons, and can not keep up with cavalry.

The following named troops are placed under the orders of the Colonel:

20th Regiment of Infantry,
 1 squadron of 6th Cavalry,
 1 battery 1st Regiment Field Artillery,
 $\frac{1}{2}$ company of Engineers,
 Detachment of Hospital troops.

The outposts at Easton are provided by other troops.
 Imagine yourself in the place of Colonel A.

Questions:—

1. How much of the information and instructions you have received will you communicate to your subordinates? Give your reasons.
2. How much of your plans will you communicate to your subordinates? Give your reasons.
3. How will you employ your cavalry, attached to your advance guard, or independent of your advance guard? Give your reasons.
4. What orders do you give to the several fractions of your command, if any? Have you taken on yourself the duties of any of your subordinates? If yes, give your reasons.
5. Will you start on one or several roads? Give your reasons.
6. What hour of starting do you propose? How do the several commands know where they are to march?
7. Give the various dispositions that might be made of your train. Which do you adopt? Give your reasons.
8. What measures will you take to protect the train?
9. What position will you assign yourself? Give your reasons.
10. What different ways would be available for communicating this order to the troops? Which did you adopt?
11. What proportion of your force will you assign to your advance guard? Give your reasons.

12. What distances will you prescribe? Give your reasons.
13. Will you designate a commander for the main body? Give your reasons.
14. Will you designate the order of march of any subdivision of your force? Give your reasons.
15. Are any dispositions necessary for guarding the flanks? If yes, what are they?
16. What position do you assign to the following troops : Engineers? Hospital troops? Artillery? Give your reasons.

NO. 5. PROBLEM IN ORGANIZATION.

You are placed 'in command of 3,240 companies of infantry, 564 troops of cavalry, 180 batteries of light artillery, and 29 batteries of horse artillery. Give this force a proper organization, and state the proper rank of the commander of each higher unit as you organize it. State how many battalions of engineers and companies of signal and hospital troops you will need for this force. State (without giving number of men, or details of organization) what else would be required to complete your organization. Regarding yourself as the commander of the entire force, give the composition of your staff.

Note:-The field hospital and hospital reserve are each regarded as a company of hospital troops.

Field Practice Exercises.— The first endeavor was to make these exercises simple and easy, and to give an abundance of time for the solution of the various questions. A mounted detail, consisting of not more than four officers, reported each day. A different problem was given to the cavalry and infantry officers, but the same situation was assumed for all officers of the same arm.

The officers were directed to imagine a command marching on a single road. At a certain point which was shown to them on the map they were to consider the command opposed by a small body of the enemy. Various questions, developed

by the tactical capacities of the terrain, were then asked, and the officers told to go to the ground, and, after a careful examination of the terrain, to write out answers to the questions, which were to be handed in on the following morning with a map of the ground considered. The instructor read and studied the work of each officer and verified it on the ground itself. After each officer had served on this detail the Instructor rode with the entire body to the ground under consideration, criticised the main points brought out by the papers, and read a number of accepted solutions.

The questions were of the following general nature:—

Questions No. 1. What do you find from a reconnaissance of the ground?

Question No. 2. What are your plans for making the attack?

Question No. 3. What verbal orders do you give?

Question No. 4. What message do you send to the commander of the force?

This, the most elementary form of an exercise of this kind, was intended simply as a preliminary to more advanced work next season.

MAP MANEUVERS.

Maneuvers on the Map:—The course in Map Maneuvers was begun by a lecture on the principles of Kriegsspiel. This was followed by a “quiz” on the first lecture, and by a second lecture on the conduct of an exercise.

In the Map Maneuvers, or Kriegsspiel exercises, the Class was divided into four sections. Each section had six sessions at the exercise, making in all twenty-four sessions each two to three hours long.

The entire time at this portion of the exercise was given to making out one of the studies of Von Verdy du Vernois, which was adapted to suit our purposes. In this way an excellent preliminary practice was given, and it is believed the officers were for the most part well grounded in the principles. At this time all complications induced by reference to the

numerous tables and complex calculations of Kriegsspiel were rigidly excluded. As the idea was to follow a pre-arranged plan, which was not known to the officers, they were closely questioned on all points involving their duties in numerous cases, the answers being frequently given in writing, and full time being given for studying the situation.

After each phase of the exercise was gone through in this way, a decision was made, and usually the reasons for the same were explained.

It is proposed to follow this by other exercises, first on the same maps, and then on other maps, in which full freedom will be allowed the officers in forming their plans and making decisions according to their own judgment.

Some changes in the text-books and methods of instruction in the course in Strategy and Logistics are contemplated. The adoption of Von der Goltz's "Conduct of War" is recommended. This is a work of great merit by the greatest of living military writers, and it has been ably translated into English by Lieutenant J. T. Dickman, 3rd Cavalry, Assistant Instructor in Military Art. It is intended to supplement this work with a course of lectures on the most important campaigns of modern times.

Attention is respectfully invited to the evils arising from the retention here of officers who have been found deficient on examination and re-examination, and who have been so reported to the Headquarters of the Army. The conditions of the examinations are liberal in the extreme. An officer found deficient on examination is given a re-examination within twenty days, at such a time as he himself may elect. The class has a thorough course of recitations in every subject before examination; the examinations are so conducted as to avoid crowding the students for time, and to give them ample opportunity to answer each question with deliberation; and an instructor is always present to clear up any doubt as to the meaning of a question should any student be perplexed about the same. Under the circumstances, it is a safe con-

clusion that when an officer is found deficient in an examination, his failure is due either to neglect of duty or to hopeless incapacity. In the former case he does not deserve a re-examination, and in the latter it does him no good. Yet after the re-examination has emphasized their deficiency, students are kept here, presumably under the idea that in the latter case they may 'learn *something*," and that in the former case they are "subjects for discipline." Disciplinary measures, it may be remarked, cannot reach the case at all ; for the entire School Staff might be morally sure of the indolence and neglect of a student without being able to establish a legal certainty of the same ; nor can it be regarded as either wise or charitable to compel a deficient officer to prove his mental incapacity as a means of establishing a reputation for zeal and industry. To keep an officer here after he has been reported deficient by the School Staff is calculated to impress him with the idea that his military superiors view his deficiency as a matter of small moment. It should be understood throughout the army that the Infantry and Cavalry School is neither a pleasant resort for a lazy officer nor a convenient asylum for a stupid one; and the best means of conveying a realization of this fact is by returning immediately to his regiment any officer who has been duly reported deficient by the School Staff.

The School is still hampered somewhat by the inequality, in the attainments of the members of the class. This is not so marked as it was formerly, and the number of poorly-prepared officers in the present class is very small; but a few colonels still seem to insist on recommending poorly educated lieutenants for detail as students, apparently under the impression that the object of the School is not to instruct intelligent and able men in the higher duties of the military profession, but to remedy the educational deficiencies of a few men who are not prepared to profit by an extended course of military study. Such a view

would imply a failure to appreciate the true nature of our army and the part it will be called upon to play in time of war. The armies of volunteers who will form the great -the almost exclusive-bulk of our fighting forces must draw upon the commissioned personnel of the line of the regular army for officers to perform the duties which in the great armies of Europe devolve upon the select body of officers known as the "General Staff"-a body unknown in our army, and one which, even if created, could not be maintained in time of peace in sufficient size for the requirements of war. The line of the army should contain, therefore, many officers competent and qualified to perform duties requiring a knowledge of strategy, tactics, logistics, military administration, military topography and fortification, whether as commanders themselves, or as valuable staff officers. The curriculum of the Infantry and Cavalry School is not widely different from that of the War Academy at Berlin, to which subalterns of the German army selected for their marked ability are sent. To send the deficient subalterns of a regiment to such a school would be manifestly absurd; and it is believed that such men can easily find at their posts instruction commensurate with their ability, their ambition, or the requirements of any position they are likely to hold in future. When the colonels of the different regiments of cavalry and infantry *all* select for detail at the School subalterns who are able, studious and ambitious, the institution will rise to the full measure of its importance as a factor in the education of the army.

It is very respectfully, but most earnestly, recommended that the details for duty as professor of military science and tactics at colleges, and for duty with State troops, be limited, as far as practicable, to officers who have graduated either at the Infantry and Cavalry School or at the Artillery School. It is believed that such officers are much better, qualified for these duties than officers of similar age and length of service

who have not passed through the officers' schools; and such details would also constitute a reward for creditable graduation.

Very Respectfully,

Your obedient servant.

ARTHUR L. WAGNER,

Captain, 6th Infantry,
Instructor.

APPENDIX C.

U. S. Infantry and Cavalry School.

Department of Engineering.

Fort Leavenworth, Kansas, June 30, 1896.

To

The Secretary,

U. S. Infantry and Cavalry School.

Sir:

In compliance with paragraph 56, Regulations U. S. Infantry and Cavalry School, I have the honor to report as follows:

Allotment of Time.—The time assigned by schedule to this department since my last annual report has been used as follows, viz: —

Oral recitations.	54
Written recitations"	16
Practical exercises	49 half days.
Drawing.....	14 half days.
Semi-annual examinations	10 half days.

With two more whole days for practical work, the course I had contemplated for this year would have been completed; however (as has been the custom heretofore), the practical part of this subject, in so far as road reconnaissance and outpost and position sketching pertains to it, will be carried on as opportunity offers during the next school year.

Text Books.—The text book used during the past year (“Military Topography and Sketching” by Lieutenant Root) replaced Johnson’s “Theory and Practice of Surveying” and Richards’ “Military Topography” which have heretofore been in use.

The subject matter of this new book was partly compiled by Lieutenant Root from the best sources, native and foreign, and was partly derived from his experience of seven years’ work at this school: with some changes (mainly typographical) to be made in the new edition, it will fully meet my expectations and wishes and will cover the subject of Military Topography in a most thorough and comprehensive manner.

Practical Exercises.—The time devoted to practical exercises during the past year has been about four-tenths of the total allotted to the department; while next year’s work will probably be three-fourth’s practical, owing to the fact that all of the theoretical work pertaining to Surveying and Topography has been completed.

The practical course during the past year for each member of the class was as follows:—

IN SURVEYING.

A survey of a portion of the reservation (about 8 acres).
Instruments: Surveyor’s compass and chain.

A survey of another portion of the reserve using transit and chain.

3. Using the transit to prolong a right line.
4. The making of a Plane Table survey.
5. The solution of a Differential Level problem.
6. The determination of a Profile and afterward the establishing of a grade line of a given fall.
7. The contouring of about 5 acres of the reserve, using the transit and stadia,
8. The making of two observations for true meridian by means of the transit and solar attachment.

IN MILITARY TOPOGRAPHY.

9. The contouring of the hill north of Merritt's Lake. **Instruments:** Box compass and clinometer. Distances paced.

10. Same for the slopes in front of Sherman Hall.

11. The making of a 5-mile traverse using the Topographical Field Note Book.

12. Making a traverse, contouring and plotting at sight with Field Board.

13. Making a combined survey and contouring about one square mile of the reserve.

14. Making a Road Reconnaissance sketch, mounted, using the Cavalry (Field) Sketching Case.

The method of determining a true meridian by an observation on Polaris was also shown to the class, although they did not make the determination individually,

The problems in Surveying done in the field were afterward plotted to scale in the draughting room.

These problems in Military Topography and Surveying are, of course, all done with extreme care by the Instructors independently of the students, so that the liability to error in grading this work is very slight.

An accurate record of all practical work done during the last four and one-half years has had the result of systemizing this course, so that no time is now lost in experimenting as to the proper sequence of the work or in requiring more than can reasonably be expected.

The New School Regulations.—The effect upon the welfare of the school caused by the radical departure in the new school regulations from the former system of marking the daily recitations, is worthy of note.

Addition to School Building.—The addition to Sherman Hall has added very materially to the usefulness of this department. The draughting room and individual desks have long been needed and are fully appreciated. A serious defect in the draughting room, however, became apparent as soon as the

entire class attempted to use it at one time. The lack of a skylight (which was disallowed) renders the room too dark on the west side to be used in winter without lighting the lamps; otherwise the addition fulfils its purpose very satisfactorily.

Instruments.—In order to carry out the course in Surveying for the class to enter next year there is needed another surveyor's compass, a level, and a Sægmüller attachment for the transit, besides a complete outfit of steel rulers and triangles. Many of the smaller instruments in the hands of the students on memorandum receipts are about worn out and should be replaced. It is estimated that \$480.00 could be judiciously expended on new instruments, besides the ordinary repairs to those on hand after a season's use in the field.

Very respectfully,

Hour obedient servant,

WM. D. BEACH,

Captain, 3rd Cavalry,
Instructor.

APPENDIX D.

U. S. Infantry and Cavalry School.

Department of Law.

Fort Leavenworth, Kansas, June 30, 1896.

TO

The Secretary,

U. S. Infantry and Cavalry School.

SIR :--

As required by paragraph 56, School Regulations, I have the honor to submit my report for the school year just closed.

Recitations in International Law commenced on Thursday, January 16, 1896, and continued until February 21. In Constitutional Law, recitations began on Monday, February 24, and continued until March 26. General review in International Law was from May 18 to 22 inclusive, in Constitutional Law, on May 25, 27, 28 and 29.

In addition to the recitations above noted, lectures were given as follows :

- February 19. "The Monroe Doctrine." by Captain H. A. Greene.
- " 20. "Naturalization." by Captain W. B. Reynolds, followed by one of the International Law problems of the Naval War College (summer of 1895); read by Captain Greene.

- . February 21. "Conflict of Laws." by Lieut. Nat P. Phister, followed by another problem as above.
- March 26. A lecture entitled "Rights of Ships" delivered by Hon. Frederic R. Coudert before the Naval War College on October 2, 1895; read by Captain Green.

After the close of the course of theoretical instruction, two problems of International Law were given to the class, of which solutions were required together with lists of authorities and citations of precedents. These problems were given for the purpose of testing the students' knowledge of certain International Law Principles and to cause the class to investigate the Library and familiarize themselves with the works containing treaties, precedents, etc. The problems are enclosed. (Exhibit 1.)

I would suggest that with the next class, an additional text book be used in Constitutional Law, viz: "Hart's Constitution of the United States." It is rather elementary; but by using it first and requiring the Constitution studied in connection therewith to be practically committed to memory, the student will be better prepared to consider the subject as treated in "Cooley." I would respectfully recommend that representations be strongly made to the War Department as to the inadvisability of retaining student officers at the School after the Staff has recommended their return to their regiments. The Staff can certainly be trusted not to make this recommendation unnecessarily. It is of no benefit to the man and certainly none to the school to have a man drag along after he has demonstrated his inability to complete the course. If we have commissioned officers in the army whose early education has been so sadly neglected that they cannot pursue the curriculum of this school, (unfortunately we have such) and they must be educated, I would suggest some other way than that of lowering the standard of this school to fit these exceptional cases. The way to prevent such a situation of affairs with respect to prospective officers, is obvious.

I do not recommend any further extension of the law course as I consider it amply sufficient at present.

I deem it only necessary for an officer of the line to have a sufficient knowledge of law to understand the duties and privileges of a citizen at home and abroad; to appreciate the relations existing between himself and the civil authorities of his own country in peace and war; to know the extent and application of military authority over the people of an invaded country and the laws governing war generally; together with a sufficient knowledge of Military Law proper, to enable him to assist in the administration of justice that the ends of discipline may be subserved.

A more intimate knowledge of the *modus operandi* of suits at law to which a military man may be a party, particularly where in the performance of military duty he may become involved in a conflict with state or municipal authority; with an outline of the methods he should pursue, under various circumstances and conditions, seems to me to be desirable.

To this end it is my intention, in connection with the Military Law course, during the coming year, to deliver a lecture covering as many as possible of the points enumerated.

In my opinion, the experience of the last school year has demonstrated the fact that the system of not marking the daily recitations possesses advantages far outweighing any possible disadvantages.

The necessity of a very thorough and comprehensive written examination in connection therewith is apparent; as otherwise it would be practically impossible to differentiate those student officers who are making a close race for either end of the class. I recommend a further continuance of the non-marking system.

Very respectfully,

Your obedient servant,

H. A. GREENE,
Captain, 20th Infantry
Instructor.

APPENDIX D. EXHIBIT 1.

INTERNATIONAL LAW.

PROBLEMS.

No. 1.

Mexico and Nicaragua are at war. The Nicaragua canal is in course of construction under a concession granted to an American company. It having become evident that the Nicaraguan authorities are unable, during the disturbed state of affairs, to afford proper protection, either to the canal company's employes or to other citizens of the United States, there engaged in mercantile pursuits connected more or less intimately with the operation and construction of the canal; the United States intervenes, under the provisions of the treaty with Nicaragua made in 1868, and sends to Nicaragua a force adequate to afford the needed protection.

You are in command of a camp of United States troops near the Toro Rapids of the San Juan River, on the line of the canal. A force of Nicaraguan troops nearly equal to your force is in camp about one mile from you.

One morning a young man about twenty years old, and, judging from his complexion, accent, and general appearance, a Nicaraguan, appears at your quarters, and, having presented a card bearing the name, Ramon Gonzalez, requests your protection from arrest by the Nicaraguan authorities, basing his application upon the following statements, viz :

1. That he is the son of Carlos Gonzalez, a native of Nicaragua, who was a naturalized citizen of the United States, having removed to the U. S. from Nicaragua when the son was about five years old, and having resided in California from that time until about three months before the application.

2. That the son, Ramon, accompanied his father to Nicaragua for the purpose of settling some business connected with the estate of a deceased relative, neither of them having any intention of remaining after the completion of that business.

3. That the father died of fever at Fort San Carlos, Nicaragua, three days ago; and that this morning he, the applicant, has received information from a friend that a warrant is out for his arrest; the intention of the authorities being to force him into the military service of Nicaragua.

In support of his statements he hands to you the following papers, viz : (a) Naturalization papers of Carlos Gonzalez, in due form, attested by the Clerk of the U. S. Circuit Court, and dated at San Francisco, Cal., about nine years ago. (b) Certificate of marriage of Carlos Gonzalez and Candelaria Sanchez, dated at Managua, Nicaragua, about twenty-one years ago. (c) Certificate of birth of Ramon Gonzalez, son of the above named parties, apparently in due legal form, and dated at Managua, Nicaragua, about nineteen years ago. (d) Passports for Carlos Gonzalez and Ramon, his son, issued in due form by State Department at Washington, D. C., and containing personal description tallying perfectly with that of the applicant.

There is no representative of the Department of State within communicating distance.

Question 1. What answer do you make to the young man's application, and why ?

About an hour after this, your officer of the guard informs you that an armed party of about twenty Nicaraguan troops have appeared at the guard tent and demand admission to your camp, for the purpose of arresting a deserter named Ramon Gonzalez, or that he be surrendered to them.

Question 2. What answer do you make to this, and why?

You then address a letter to the commander of the Nicaraguan camp. Give the letter.

Next day you receive information from your officer of the day that Ramon Gonzalez has been arrested a short distance from your camp by Nicaraguan soldiers, and taken to the Nicaraguan camp, the information having been brought in by one of your own men.

You address a letter to the commanding officer of the Nicaraguan camp. Give the letter.

In answer to this letter you receive a curt note from the Nicaraguan commander informing you that Ramon Gonzalez has already been tried by a court-martial for avoidance of military service in time of war, and that he will be shot at sunrise the following morning.

Question 3. What action do you take, and why?

No. 2.

An American man-of-war is lying in the harbor of Havre, France.

The captain of an American merchantman, also lying in the harbor, comes on board the man-of-war and informs the commander that on the day previous a shot was fired from his vessel by one of his crew and a person killed on board a schooner belonging to the natives in the harbor. His seaman is threatened with arrest by process from the native courts; and he brings the man on board the man-of-war, and claims for him the protection of the American flag, and trial by the U. S. courts.

What course does the captain of the man-of-war pursue?

Supposing the captain of the man-of-war holds the member of the merchantman's crew, and sends him home for trial; what should be the action of the U. S. courts?

APPENDIX E.

U. S. Infantry and Cavalry School.

Department of Infantry.

Fort Leavenworth, Kansas, June 25, 1896,

To

The Secretary,

U. S. Infantry and Cavalry School.

SIR:

I have the honor to make the following report of the Department of Infantry for the past year.

The student officers of the class having been notified before their arrival at this school to be prepared for examination in the entire text of the Drill Regulations, those of the infantry branch of service were duly examined on the 12th of September, 1895, and all passed a satisfactory examination.

From the 1st to the 15th of October, 1895, the infantry officers of the class had practical drill, three times a day, in the schools of the company and battalion, each officer acting at least once as platoon, company and battalion commander, and as battalion adjutant. All were found proficient in their drill.

At the present time I am in communication with the commanding officer of Springfield Armory regarding the experiments now being made with the new Service Rifle Cal. .30. I have received some data from there but expect to receive a full report soon after the experiments are completed, and shall thereafter correct the text of "Batchelor's Infantry Fire" to conform to the results of these experiments.

Very respectfully,

Your obedient servant,

J. T. HASKELL,

Major, 24th Infantry,
Instructor.

APPENDIX F.

U. S. Infantry and Cavalry School.

Department of Cavalry.

Fort Leavenworth, Kansas, May 31, 1896.

TO

The Secretary,

U. S. Infantry and Cavalry School.

SIR:

I have the honor to submit the following report of work done in the Department of Cavalry during the past year.

The course during the year consisted of practical drills by the cavalry officers of the student class, each officer being required to act in turn in the different capacities of platoon, troop and squadron commander, and squadron adjutant. These exercises were conducted precisely the same as are the parade examinations of officers for promotion, and a great deal of proficiency was shown. The drills covered the schools of the troop and squadron, both in normal and extended order.

In view of the fact that a large amount of the instruction given in the different Departments requires officers to be mounted, I would recommend that as much time as could be spared should be devoted to lessons in equitation in the riding hall, such officers as show proficiency in riding to be excused from the drills.

Very respectfully,

Your obedient servant,

S. S. SUMNER.

Lt. Colonel, 6th Cavalry,
Instructor.

APPENDIX G.

U. S. Infantry and Cavalry School.

Department of Military Hygiene.

Fort Leavenworth, Kansas, July 3, 1896,

TO

The Secretary,

U. S. Infantry and Cavalry School,

SIR:

I have the honor to report that instruction in the "Department of Military Hygiene" consisted entirely of lectures, recitations having been dispensed with in the revised School Regulations. Seven lectures on "Early Aid to the Injured" were delivered and included all the subjects enumerated in the "detailed programme of studies." They were illustrated by charts, &c. , and also by practical demonstrations of the application of bandages, of the method of controlling hemorrhage, of artificial respiration &c. The examination papers submitted were generally excellent and gave evidence that the class, with some exceptions, had given the subject careful study. .

Very respectfully,

Your obedient servant,

CALVIN DE WITT.

Major and Surgeon, U. S. Army,
Instructor.